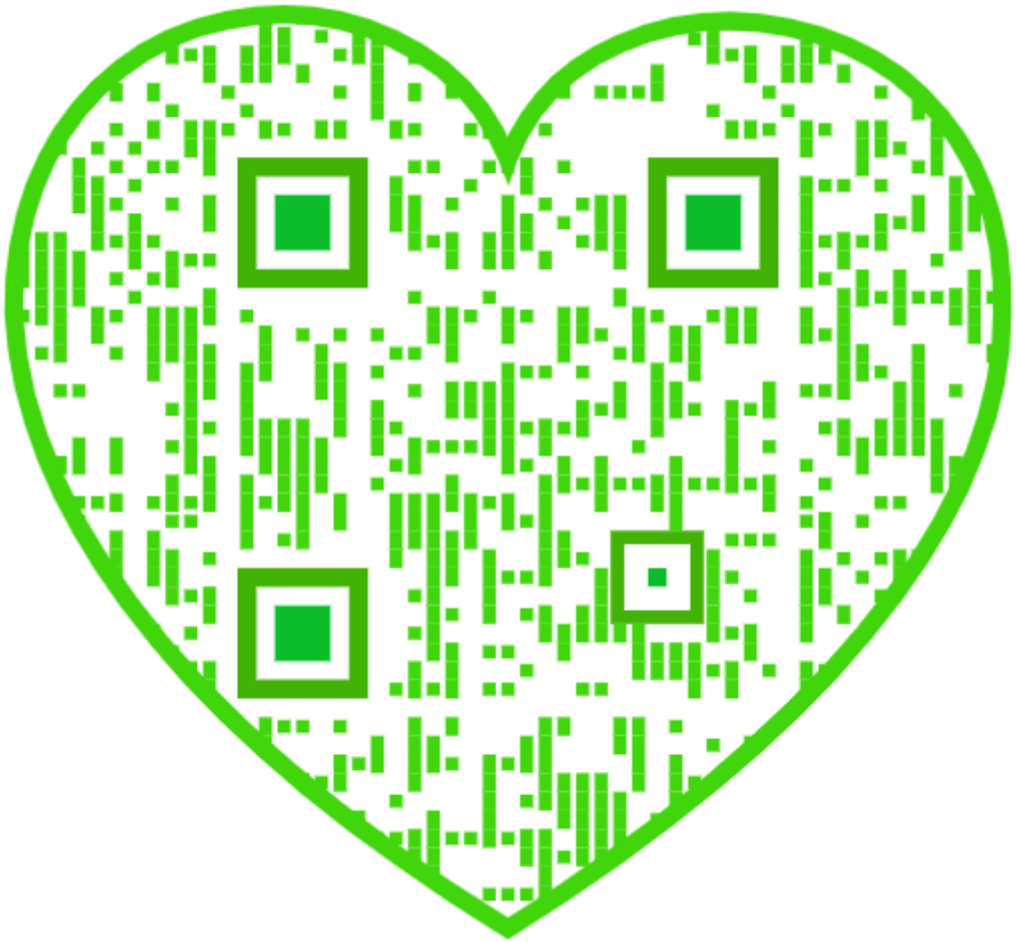
How to save money on food



UNIVERSITY OF MICHIGA[redacted]ES

Packing the product to be canned in cheesecloth for blanching

Home canning club member, showing how she uses wash boiler for a canning outfit by simply provi[ding] bottom or blanching crate and cover cloth in or[der] the cover tight and conserve heat

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How to Save Money on Food

HOW to save money is a subject dear to a woman's heart. To save money and food at the same time appeals both to the imagination and the pocketbook. In every nook and corner of the land housewives are busy on the great problems of food conservation and table economy.

Home canning is the most effective of all methods of conserving food products. It is a time-honored custom that has been gradually eliminated in most American homes. It was formerly an arduous and expensive task. Today science has made it inexpensive and easy, with the chance for spoilage practically eliminated. This revolution in home canning has come through the adoption of what is known as the cold-pack method, which is most highly recommended by agricultural colleges, domestic science schools and state departments of agriculture. The fruits and vegetables preserved by this method are delicious, and there is very little expense or spoilage.

HOW TO CAN BY THE COLD-PACK METHOD

Don't let valuable surplus fruits and vegetables go to waste. Adults and children in a very few hours, with little other home equipment than a wash boiler and cans and jars, can preserve much valuable perishable food for next winter's use. Succulent vegetables and fruits are important to health the year round. See that your table is supplied.

The simple one-period cold-pack method described is that taught by the United States Department of Agriculture for the boys and girls of the canning clubs in the Northern and Western States. With this method, practically every vegetable and fruit grown can be canned.

The wash-boiler method described is entirely effective. Those who desire may purchase home-size water-seal, steam pressure or pressure cooker canning outfits, which save time and fuel.

PRELIMINARY PREPARATION FOR CANNING

Provide a false bottom of wooden lattice work, cross pieces of wood, or coarse wire netting for your clean wash boiler or other large, deep vessel to be used for sterilizing.

Fill the vessel with clean water, so that the boiling water will cover the tops of the jars or cans. Begin heating the water so that it will be boiling violently by the time the containers are packed.

See that all cans or jars are in good condition and absolutely clean. Scald them thoroughly. Use new rubber rings and scald them just before putting them on the jars.

PREPARING FRUITS AND VEGETABLES

Start with clean utensils and clean, sound, fresh products.

Throw out all vegetables and fruits which are withered or unsound. Wash out all grit and dirt. If possible, use only fruits and vegetables picked the same day, and never can peas and corn picked more than five hours.

Prepare fruits and large-sized vegetables for blanching. Remove all spots from apples.

Prepare beans and greens as for cooking. Be especially careful to remove all foreign plants from the greens.

Blanch vegetables and all fruits except berries by leaving them from three to five minutes in clean, boiling water.

Remove the blanched products from the boiling water and plunge them quickly into cold water, the colder the better. Take them out immediately and let them drain. *Don't let them soak in the cold water.*

From this point on, speed is highly important. The blanched vegetables and fruits, which are slightly warm, must not be allowed to remain out of the jars a moment longer than is necessary.

Remove skins when required, and as each article is pared, cut it up into proper size and pack directly into the clean, scalded cans or jars.

Pack as solid as possible, being careful not to bruise or mash soft products.

In the case of fruit, fill the containers at once with boiling hot syrup.

In the case of vegetables, fill the containers with boiling hot water, to which a little salt has been added.

Place scalded rubber rings on the glass jars and screw down the tops. Seal tin cans completely. Watch them for leaks. As the preliminary treatment has taken care of expansion, it is not necessary to exhaust the cans.

HOW TO STERILIZE OR PROCESS

Put the jars or cans as soon as possible into boiling water in a wash boiler, or into your canning device. Let them process for the time specified in the table, counting from the time the water begins to boil again, or the gauge on the canning outfit registers the proper pressure.

TIME TABLE

For Scalding, Blanching, and Sterilizing of Fruits and Vegetables by One-Period Cold-Pack Method

Products	Scald Minutes	Sterilize in Wash-Boiler Minutes
Fruits of All Kinds:		
Apricots	1 to 2	16
Blackberries	No	16
Blueberries	No	16
Cherries (sweet)	No	16
Dewberries	No	16
Grapes	No	16
Peaches	1 to 2	16
Plums	No	16
Raspberries	No	16
Strawberries	No	16
Citrus Fruits	1½	12
Cherries (sour)	No	16
Cranberries	No	16
Currants	No	16
Gooseberries	No	16
Rhubarb (blanch before paring)	1 to 2	16
Apples	1½	20
Pears	1½	20
Figs	15	40
Pineapple	10	30
Quince	6	40
Special Vegetables and Combinations:		
Tomatoes	1 to 3	22
Tomatoes and Corn	T., 2; C., 10	90
Eggplant	3	60
Corn on cob or cut off	5	180
Pumpkin	5	90
Squash	5	90
Hominy	5	120
Cabbage or Sauerkraut	5	90

Time Table—*Continued*

Products	Scald Minutes	Sterilize in Wash-Boiler Minutes
Greens or Pot Herbs:		
Asparagus	5	120
Brussels Sprouts	5	120
Cauliflower	5	120
Pepper Cress	15	120
Lamb's-quarters	15	120
Sour Dock	15	120
Smartweed Sprouts	15	120
Purslane or "Pusley"	15	120
Pokeweed	15	120
Dandelion	15	120
Marsh Marigold	15	120
Wild Mustard	15	120
Milkweed (tender sprouts and young leaves)	15	120
Pod Vegetables:		
Beans (Lima or string)	5	120
Okra	5	120
Peas	5	120
Roots and Tubers:		
Beets	6	90
Carrots	6	90
Sweet Potatoes	6	90
Other Roots and Tubers, as Parsnips or Turnips	6	90
Soups, All Kinds	..	90
Shell Fish	3	180
Poultry and Game	20	210
Fish	5	180
Pork and Beef	30	240

Time schedule given is based upon the one-quart pack and upon fresh-picked products.

After processing, remove the containers.

Tighten the tops of jars immediately and stand the containers upside down in a cool place, being careful that no draft strikes the hot jars. Watch for leakage and screw covers down tighter when necessary. Store in a cool, dry place, not exposed to freezing temperature.

From time to time, especially in very hot weather, examine jars and cans, making certain that there are no leaks, swellings, or other signs of fermentation.

There will be no spoilage if the directions are followed implicitly and the containers are sealed up tight.

Fruits which are put up with heavy syrups can be kept under cork and paraffin seal. Save all wide-necked bottles, glasses, and jars for putting up fruits.

Vegetables, meats, and fish, however, cannot be kept safely unless they are hermetically sealed. Reserve regular jars for products that cannot be packed in other ways.

As there may be some difficulty in securing cans and jars, dry or keep in other ways everything that need not be canned.

CANNING FRUIT WITHOUT SUGAR

Fruit for use in pie or salads or as stewed fruit can be put up or canned without the use of any sugar at all. Those who, because of the high price of sugar, have been thinking of reducing the amount of fruit they put up, may can as much of their surplus as possible by the use of boiling water when sugar syrup is beyond their means. Any fruit may be successfully sterilized and retained in the pack by simply adding boiling water instead of the hot syrup. The use of sugar, of course, is desirable in the canning of all kinds of fruits, and makes a better and ready-sweetened product. Moreover, most of the fruits when canned in water alone do not retain their natural flavor, texture and color as well as fruit put up in syrup. Fruit canned without sugar to be used for sauces or desserts must be sweetened.

DIRECTIONS FOR CANNING FRUITS WITHOUT SYRUP

Can the product the same day it is picked. Cull, stem, or seed, and clean the fruit by placing it in a strainer and pouring water over it until it is clean. Pack the product thoroughly in glass jars or tin cans until they are full; use the handle of a tablespoon, wooden ladle, or table knife for packing purposes. Pour over the fruit boiling water from a kettle, place rubbers and caps in position, partially seal if using glass jars, seal completely if using tin cans. Place the containers in a sterilizing vat such as a wash boiler with false bottom, or other receptacle improvised for the purpose. If using a hot-water bath outfit, process for thirty minutes; count time after the water has reached the boiling point; the water must cover the highest jar in container. After sterilizing, remove packs, seal glass jars, wrap in paper to prevent bleaching, and store in a dry, cool place.

If you are canning in tin cans, it will improve the product to plunge the cans quickly into cold water immediately after sterilization. When using a steam pressure canner instead of the hot-water

bath, sterilize for ten minutes with five pounds of steam pressure. Never allow the pressure to go over ten pounds.

FRUIT JUICES FOR JELLY-MAKING KEPT WITHOUT SUGAR

Fruit juices for use later in jelly-making can be sterilized and bottled without sugar and made into jellies at the housewife's convenience. This enables her to do with fewer jelly glasses and to distribute her purchases of sugar for jelly-making through the year. Moreover, with the bottled juice she can make a greater variety of jellies, as juices which will not jell can be put up when the fruit is ripe and combined later with fruits that will jell, or fruits ripening at different seasons can be combined. For example, the juice of strawberries, cherries, or pineapple can be kept without sugar and later when apples are plentiful, can be made into combination jelly.

From the unsugared sterilized juices of currants, apples, crab-apples, and grapes, kept from nine to eighteen months, the Bureau of Chemistry, United States Department of Agriculture, recently made jellies of excellent texture, flavor, and color.

To put up unsugared fruit juices for jelly-making, proceed exactly as if jelly were to be made at the time. Cook the fruits until they are soft and strain out the juice through a flannel bag. Heat and pour while hot into bottles previously scalded. Fill the bottles full, leaving no air space between juice and cork or seal. Place the filled sealed bottles on their sides in water near the boiling point, and keep them in the bath for about thirty minutes. Make sure that the corked or sealed end is under the hot water. As soon as the bottles are cool, cover the cork with a paraffin seal. Thorough sterilization and sealing are absolutely essential to success.

To make jelly from the sterilized juice, test its jelling quality, add the proper amount of sugar, and proceed as in making jelly from freshly-expressed juice.

TO PRESERVE VEGETABLES BY FERMENTATION

The fermentation method widely used abroad in preserving string beans, beets, cabbage, cucumbers and other succulent garden crops, is described in a notice just issued by the United States Department of Agriculture.

Sauerkraut and pickles put up in this way are fairly well known in this country, but comparatively few persons have thought of trying it as a household measure for preserving these and other vegetables. Those who like acid foods and who have too few canning containers to hold their surplus products may find this method useful. The following description of this method of fermenting vegetables is prepared by one of the bacteriologists in the Bureau of Chemistry, who has been experimenting with this process.

The vegetables are not cooked, but are put down in a salt brine in any non-metal water-tight container and are sealed up with paraffin and are otherwise made air-tight. Under this treatment lactic acid will develop, and this acid, the value of which as food has been recognized, acts as a preservative. Whether Americans will develop a taste for such fermented foods highly prized in Europe is open to question, but the investigator believes that many will find the process well worth trying.

TO PRESERVE CUCUMBERS

Wash the fruit if necessary and pack into a clean, water-tight barrel, keg, or crock. On the bottom of the barrel place a layer of dill wood and a handful of mixed spice. Add another layer of dill and another handful of spice when the barrel is half full, and when almost full add a third layer. If a keg or crock is used, the amount of dill and spice can be reduced in proportion to the size of the receptacle. When the container has been filled within a few inches of the top, add a layer of covering material—beet tops or grape leaves —about an inch thick. If any spoilage should occur on the surface, this layer will protect the vegetables beneath. Press down with a clean board weighted with bricks or stone. Do not use limestone or sandstone.

Make a brine by adding one pound of salt to ten quarts of water. To each ten quarts of brine so made add two-thirds of a quart of vinegar. The vinegar is used primarily to keep down the growth of injurious bacteria until the lactic acid ferment starts, but it also adds to the flavor. Add sufficient brine to cover the material and allow to stand twenty-four hours. Then make air-tight, as described on page 10. The time necessary for complete fermentation to occur depends upon the temperature. In a warm place, only five days to a week may be necessary; in a cool cellar, three to four weeks.

BEETS AND STRING BEANS

The strings should be removed from string beans before they are put up. Beets, of course, require careful washing to remove all dirt before brining. If it is desired, when finally the beets or string beans are to be eaten, to wash out the brine and serve them as fresh vegetables, the addition of spice when they are put up is not necessary. Proceed as with cucumbers.

MAKE THE CONTAINERS AIR-TIGHT

There will always be more or less bubbling and foaming of the brine during the first stages of fermentation. After this ceases, a thin film will appear, which will spread rapidly over the whole surface and develop quickly into a heavy, folded membrane. This scum is a growth of yeast-like organisms which feed upon the acid formed by fermentation. If allowed to grow undisturbed, it will eventually destroy all the acid, and the fermented material will spoil. To prevent this scum from forming, it is necessary to exclude the air from the surface of the brine. This should be done by either of two methods, twenty-four hours after the vegetables have been packed.

Perhaps the best method is to cover the surface—over the board and around the weight—with very hot, melted paraffin. If the paraffin is sufficiently hot to make the brine boil when poured upon it, the paraffin will form a smooth, even layer before hardening. Upon solidifying, it effects an air-tight seal. Oils, such as cottonseed oil, or the tasteless liquid petroleum, may also be used for this purpose. As a measure of safety with crocks, it is advisable to cover the top with a cloth soaked in melted paraffin. Put the cover in place before the paraffin hardens.

The second method, which may be used with barrels or kegs, is to pack the container as full as possible and then replace the head. In using this method for fermentation of beets, cucumbers, or string beans, add the board and weights as described above and allow to stand for twenty-four hours before heading. During this period most of the gas first formed escapes and the container then may be headed up tight, first removing the board and weights. Then bore an inch hole in the head and fill the barrel with brine, allowing no air space. Allow bubbles to escape. Add more brine

if possible, and plug the vent tight. If the barrel does not leak fermented products put up in this manner will keep indefinitely.

After sealing with paraffin, the containers should be set where they will not be disturbed until the contents are to be used. Any attempt to remove them from one place to another may break the paraffin seal and necessitate resealing. If the containers are not opened until cold winter weather, the vegetables should keep without spoilage until they are used up. If opened in warm weather, they are likely to spoil quite rapidly unless the paraffin is reheated and the container resealed immediately. In the case of cucumbers and chayotes, it is preferable, if enough material is available, to use the method of packing in kegs or barrels as described above.

Only those vegetables which cannot be kept by storing, or early ones that are not available later in the season, should be preserved. Late beets, for example, can be better kept in the cellar.

The method of putting up cabbage by fermentation has a number of advantages over the present process of making sauerkraut, and will be described in a later article.

A circular describing the fermentation method is now available for distribution from the States Relations Service of the Department of Agriculture.

SAVE YOUR BOTTLES

Glass bottles, especially wide-necked ones, are useful for putting up fruits, jellies, and preserves.

Every housekeeper should save bottles—especially wide-necked ones—for putting up fruits, preserves, jellies, jams, and fruit juices. Saving of bottles is highly important, they say, as there threatens to be a serious shortage of regular jars and preserving cans this season.

The fruit products named, if sealed with corks and paraffin, can be kept perfectly in these makeshift containers. Jellies, jams, and preserves can be kept even in ordinary drinking glasses, by the use of paper and paraffin. Fruit juices should be packed in ordinary small-necked bottles.

Vegetables, soups and meats, on the other hand, to keep must be sealed by the usual fruit-jar or tin-can packing methods. Reserve regular containers for foods that cannot be packed in bottles.

The specialists are also urging all members of canning clubs and others not only to can products, but to dry and evaporate all such products as apples, pumpkin, and squash. They advise strongly

that if containers are scarce locally, those in stock should be used to preserve perishable products which have the highest nutritive value. Nothing should be packed in jars or cans which can be conserved effectively in other ways.

Candy containers or other glass jars with screw tops or glass stoppers, and in fact any receptacle of glass, crockery, or porcelain, can be sealed with cork or paper and paraffin.

Large tin canisters or tin cans with removable covers, provided the body of the container is air and water-tight, will be found useful in canning certain fruit products. Such containers can be sterilized and their covers hermetically sealed in place with solder or wax.

HOME DRYING OF VEGETABLES AND FRUITS

Dry vegetables and fruits for winter use if tin cans and glass jars for canning are scarce or expensive. Drying was a well-recognized and successful way of preserving certain foods before canning came into general use, and modern methods make it still more practicable than formerly, either in the home or by community groups.

METHODS OF DRYING

Three methods of drying have been found by the Department specialists to give satisfactory results. These are sun drying, drying by artificial heat, and drying with air blasts, as before an electric fan. Trays for drying by any one of these methods, as well as tray frames for use over stoves or before fans, can be made satisfactorily at home. Frames and trays for use with artificial heat may be purchased complete if desired.

Home-made trays may be made of side and end boards three-fourths of an inch thick and two inches wide, and bottom boards of lathing spaced one-fourth of an inch. If desired, one-fourth-inch galvanized wire mesh may be tacked to the side and end boards to form the bottoms of the trays. Frames for use before fans may be made of wood of convenient size. Frames for use with artificial heat should be made of non-inflammable material to as great an extent as possible. As many as six trays may be placed one above ther when artificial heat is used. In drying before a fan, the f trays that may be placed one above the other will depend

to a large extent, upon the diameter of the fan. In drying in the sun, trays as described may be used, or the products to be dried may be spread on sheets of paper or muslin held in place by weights.

PREPARING PRODUCTS FOR DRYING

Vegetables and fruits will dry better if sliced. They should be cut into slices one-eighth to one-fourth of an inch thick. If thicker they may not dry thoroughly. While drying, the products should be turned or stirred from time to time. Dried products should be packed temporarily for three or four days and poured each day from one box to another to bring about thorough mixing, and so that the whole mass will have a uniform degree of moisture. If during this "conditioning" any pieces of the products are found to be too moist, they should be returned to the trays and dried further. When in condition, the products may be packed permanently in tight paper bags, insect-proof paper boxes or cartons, or glass or tin containers.

Spinach.—Spinach that is in prime condition for greens should be prepared by careful washing and removing the leaves from the roots. Spread the leaves on trays to dry thoroughly. They will dry much more promptly if sliced or chopped.

Beets.—Select young, quickly-grown, tender beets, which should be washed, peeled, sliced about an eighth of an inch thick, and dried.

Turnips should be treated in the same way as beets.

Carrots should be well grown, but varieties having a large, woody core should be avoided. Wash, peel, and slice crosswise into pieces about an eighth of an inch thick.

Parsnips should be treated in the same way as carrots.

Onions.—Remove the outside papery covering. Cut off tops and roots. Slice into one-eighth-inch pieces and dry.

Cabbage.—Select well-developed heads of cabbage and remove all loose outside leaves. Split the cabbage, remove the hard, woody core, and slice the remainder of the head with a kraut cutter or other hand-slicing machine.

Beet Tops.—Tops of young beets in suitable condition for greens should be selected and washed carefully. Both the leaf stalk and blade should be cut into sections about one-fourth inch long and spread on screens and dried.

Swiss chard and **celery** should be prepared in the same way as beet tops.

Rhubarb.—Choose young and succulent growth. Prepare as for stewing by skinning the stalks and cutting into pieces about one-fourth inch to one-half inch in length and dry on trays.

Raspberries.—Sort out imperfect berries, spread select berries on trays, and dry. Do not dry so long that they become hard enough to rattle. The drying should be stopped as soon as the berries fail to stain the hand when pressed. Pack and "condition."

SYRUPS

Syrups are employed usually in canning fruits. A formula much used in some sections for syrup is three quarts of sugar to two quarts of water, boiled to a thin, medium-thin, medium-thick, or thick syrup. The formula sometimes called the Eastern formula is three quarts of water to two quarts of sugar, boiled to a thin, medium-thin, medium-thick, or thick syrup. The first formula may be used in canning all kinds of fruits delicate in flavor and texture, and when sugar is low or reasonable in price. When sugar is high in price and the character of the fruit is such that less sugar is required, the Eastern formula may be used.

Syrups of the approximate densities desired may be made without the use of an instrument for determining density if the following points are kept in mind:

Thin syrup is sugar and water boiled sufficiently to dissolve all of the sugar, but is not sticky. Such syrup has a density of from 12 to 20 per cent.

Medium-thin syrup is that which has begun to thicken and becomes sticky when cooled on the finger tip or spoon (density of from 20 to 40 per cent).

Medium-thick syrup is that which has thickened enough to roll or pile up over the edge of the spoon when it is poured out (density of from 40 to 50 per cent).

Thick syrup is that which has become so thick that it is difficult to pour out of a spoon or container, but is not sugared (density from 50 to 64 per cent).

Thin syrups are used for all sweet fruits, such as cherries, peaches,

apples, etc., that are not too delicate in texture and color. Medium-thin syrups are used in the canning of the medium-sweet fruits, such as blackberries, currants, dewberries, huckleberries, raspberries, etc. Medium-thick syrups are used in the canning of all sour fruits, such as gooseberries, apricots, sour apples, etc., and delicately colored fruits, such as strawberries and red raspberries. Thick syrup is used in preserving and making all kinds of sun-cooked preserves.

THE KING OF AMERICAN FRUITS

The apple is the most important fruit grown in the United States, considering the quantity produced, value of product, and wide distribution of cultivation.

To keep apples in prime condition through the winter months, it is necessary to store them in a cool place. Partition off a part of the cellar as a cold room and leave the window open a little way, except in very cold weather. Too much cold is better than warmth.

Vegetables and fruits often are stored in quantities in hot, damp, and poorly ventilated bins and cellars, under conditions which hasten wilting, fermentation, and decay.

THE NUTRITIVE VALUE OF FOODS

Every woman can render important service to the nation in its present emergency. She need not leave her home or abandon her home duties to help the armed forces. She can help to feed and clothe our armies and help to supply food to those beyond the seas by practising effective thrift in her own household.

Every ounce of food the housewife saves from being wasted in her home—all food which she or her children produce in the garden and can or preserve—every garment which care and skillful repair make it unnecessary to replace—all lessen that household's draft on the already insufficient world supplies.

TO PLAN THREE MEALS

What to Serve to Nourish the Family for the Least Money

Housewives in many cases can reduce the cost of supplying their tables without reducing the nutritive value of the food served by

giving more thought than usually is given to the selection, preparation, and combination of foods. In fact, where carelessness has been the rule (and carelessness is not related to the size of the income), careful planning may make possible both a reduction of cost and an increase in nutritiveness and palatability. If any changes are to be brought about in the menu to which a family has been accustomed, however, by eliminating certain articles or substituting less expensive ones, care should be taken that the resulting diet is rational; that is, that it does not contain, on the one hand, too great a proportion of foods of any one type, such as meats and meat substitutes, or starch, sugars, and fats, or vegetables and fruits, and that, on the other hand, it is not deficient in any of these types of food.

In general, habit and custom, shaped by normal appetites, have led to the general adoption of adequate and varied diets in most families where the means are sufficient for any range of choice. Thus when meat—a food rich in nitrogen—is eaten, potato, rice, bread, or some other starchy food, and fruits and vegetables, and perhaps foods of the other types, usually are served with it. If a person's food habits are good, he will eat a reasonable quantity of all the foods provided and obtain a varied meal and not a one-sided one, as might otherwise be the case.

The lists of foods given at the end of this article are intended to show different types of food and different examples of each type. If the foods combined in the diet are chosen according to these types—that is, according to the purpose each group serves in the body—and are eaten in proper proportion, the meals will furnish all the kinds of nourishing elements which the body needs. The five types or groups are:

1. Foods depended upon for mineral matter, vegetable acids, and body-regulating substances, such as fruits and succulent vegetables.

2. Foods depended upon for protein, such as milk, eggs, meat, and dried legumes.

3. Foods depended upon for starch, such as cereal breakfast foods, flours, meals, and foods made from them.

4. Foods depended upon for sugar, such as sugar, molasses, syrups, honey, jams, thick preserves, dried fruits, sweet cakes, and desserts.

5. Foods depended upon for fat, such as butter, cream, salad oil, and other table fats, lard, suet, and other cooking fats and oils, salt pork, and bacon.

In order that the meals may supply all the needed nutritive elements, one must make sure that all groups are well represented, not necessarily at every meal, but when the family diet is considered day by day and week in and week out. Quantities should vary, particularly of the energy-yielding foods, for persons engaged in different pursuits necessitating different amounts of exercise. The heavier the work the more food is needed. In planning meals in accordance with the method here suggested, choose only a few dishes and make sure that the different groups are represented in the daily fare. Foods in groups 1 and 3 are less expensive, as a rule, than those in group 2, and for this and other reasons should be used freely as the basis of the diet, with sufficient amounts of foods from groups 2, 4, and 5 to round out the meals. Remember that the materials used in cooking or served with foods (flour, eggs, milk, fat, sugar, etc.) add their food value to the diet. Remember, also, that it is not necessary to supply all the types of food at every meal, providing enough of each is supplied in the course of the day. For example, if the foods which are depended upon for nitrogen (meat, eggs, milk, etc.) are found in abundance at breakfast and dinner, it it not necessary to include them at supper or lunch, or if a person prefers a light breakfast, he may leave out the nitrogen-rich food and perhaps some of the other foods in the morning and make up for it at the noon and evening meals. In the following lists dishes suitable for the different meals are grouped according to the kind of nutritive materials which predominate in each, and the groups are given in the order in which they are usually introduced in family meals. The dishes mentioned are examples only. Housekeepers will readily think of dishes of similar kind which they may prefer. The important thing is to know which foods belong to the different groups and then to see that all the groups are represented in the family meals.

BREAKFAST

Breakfast is a much more elaborate meal in some American families than in others. Where it is hearty, all five of the food groups may be represented, though usually in dishes which do not require elaborate preparation, and with more from the bread and cereal group than from any other. When a lighter breakfast is preferred, it usually consists mainly of the bread and cereal foods (group 3), with a little fat and possibly sugar (groups 5 and 4) to make it

palatable, and perhaps a little fruit (group 1). Such a breakfast is made more hearty by including milk or an egg from the protein group (group 2).

Fruits and Vegetables

(Representing group 1, depended upon to supply ash constituents and organic acids.)

Stewed prunes, dried peaches, or other dried fruits, or fresh or canned fruits when obtainable at reasonable prices. If preferred sweet dried fruits, jam, or thick preserves (representing also group 5) may be used instead. Because of their laxative properties, as well as food value, succulent fruits are eaten for breakfast and are particularly desirable if vegetables and other fruits are not freely used at other meals.

Breakfast Cereals and Breads

(Representing group 3, depended upon to supply starch.)

Breakfast Cereals: Corn-meal mush, cracked-wheat mush, oatmeal mush, rice, or other cereals. Wheat raised on the farm or bought from a near-by feed store and coarsely ground in a coffee mill is a good home-made cereal. So is popcorn.

Breads: Graham bread, whole-wheat bread, oatmeal bread, wheat flour and rice bread, muffins, popovers, griddlecakes, etc. With bread, butter (representing group 5) would usually be served, and sometimes with griddlecakes, butter and syrup (representing group 4) also.

Eggs, Meat, Milk, and Similar Foods

(Representing group 2, depended upon to supply nitrogen.)

Eggs (scrambled, boiled, poached, etc.), egg toast, meat balls, codfish balls, hash (from left-over or corned meat), and milk.

Milk taken with breakfast cereals or used as a beverage is an important source of nitrogenous material, a glass supplying as much as two ounces of lean meat or one egg. Cooking cereals with milk instead of water is a convenient way of adding nitrogenous material to the meal.

Sugar and Other Sweets

(Representing group 4, depended upon for sugar.)

Sugar, syrup, molasses, honey, thick dried fruits, jam, and heavy preserves. Sugar, honey, molasses, or syrups are usually added to other foods in cooking or when they are eaten. Dried fruits may be cooked with cereal, and so may take the place of sugar added to

them. This group serves much the same purpose in the body as group 3, but is ordinarily used in smaller quantities, and is important for flavor purposes as well as nutritive material.

Butter and Similar Foods

(Representing group 5, depended upon to supply fats.)

Cream, butter, and other fats used in cookery, bacon, fat pork.

With the exception of fat meats, the fat foods are usually eaten with other foods, or used in them or in cooking them.

LUNCHEON OR SUPPER

Luncheon, or supper, may include dishes from all five groups, but in simpler form or smaller quantity than at dinner, though such an elaborate meal is by no means necessary. If a light luncheon is desired, group 2 (meats and similar foods) may be omitted or used in smaller amounts, or if a still lighter meal is desired, dessert (represented by group 1 or group 4) may be omitted also. When the other meals are bundant, both meat and sweets or fruit might be omitted, and bread and butter or bread or cereal and milk used alone.

Eggs, Meat, Fish, Cheese, and Similar Foods

(Representing group 2, depended upon to supply nitrogen.)

Eggs; thick dried-bean soup (soy or togo beans or cowpeas, if obtainable, are as desirable as navy or other beans more commonly used), meat-stock soup; toasted cheese and crackers; chipped beef with white sauce, i. e., thickened milk sauce; dried beans or peas baked or boiled; baked peanut or other nut loaf (ground or chopped and mixed with bread crumbs, an egg, milk, and seasoning); meat stew or pie (left-over meat or cheap cuts); or codfish balls; sliced meat (from roast of previous day); cold baked or boiled bean salad; canned or fresh fish salad (if fish may be obtained cheaply); stuffed eggs; egg, nut, cheese (often used in made dishes or with crackers in place of sweet dessert), or meat sandwiches; or milk. Either hot or cold dishes are used for luncheon, according to convenience. The above list includes both.

Bread, Rolls, and Similar Foods

(Representing group 3, depended upon to supply starch.)

White bread, or "light" bread, rye bread, toast, corn bread, rolls, buns, crackers.

Either hot or cold bread may be used as desired. Cooked cereals (see list of breakfast dishes) are suitable for use when a light luncheon or supper is desired.

Butter and Other Fats

(Representing group 5, depended upon to supply fat.)

Butter, cream, table oil, and other fats and oils used on the table and in cookery.

Cakes and Other Sweets

(Representing group 4, depended upon to supply sugar and flavor.)

Sugar, jams, jellies, thick preserves, sweet dried fruits, simple cake, cookies, and "left overs" from dinner desserts.

Fruits and Vegetables

(Representing group 1, depended upon to supply ash constituents and organic acids.)

Fruit (fresh or stewed); warmed-over potatoes; left-over vegetables; fresh vegetables used in salads, such as lettuce, celery, young onions, radishes, etc. Fruits fresh or stewed are commonly eaten at luncheon or supper as dessert. Sometimes fruit is served at the beginning instead of at the end of luncheon or supper.

DINNER

Dinner is usually the heartiest meal of the day, and commonly a meal at which all the five groups are substantially represented. Generally speaking, the fewer times each group is represented by a principal dish, the simpler the meal. For instance, a dinner with a meat soup and a meat is not so simple as it would be if the soup were omitted. Meals seem more abundant if several representatives of group 1 (fruits and vegetables) are used instead of only one, and it is a common custom to serve one or more vegetables besides potatoes. Using a simple dessert, which requires little time to prepare, such as fresh or stewed fruit or preserves with cake, or omitting dessert altogether, is a good way of simplifying dinner.

Meats, Fish, Cheese, and Similar Foods

(Representing group 2, depended upon to supply nitrogen.)

Baked, scalloped, or fried fish, meat stew, pot roast, or meat loaf with gravy (inexpensive cuts), or other meat and fish dishes; baked beans (soy beans or cowpeas, if obtainable, are as desirable as navy

or other beans more commonly used); cheese with macaroni or rice; bean or peanut loaf.

Potatoes, Green Vegetables, Fruits, and Similar Foods

(Representing group 1, depended upon to supply mineral matter and organic acids.)

Potatoes, sweet potatoes, turnips, carrots, parsnips, beets, onions, greens (beet tops, kale, spinach, etc.), celery, lettuce, cabbage, collards, tomatoes, green corn, snap beans, green peas, or other green or succulent vegetables grown in the garden or which may be cheaply procured; fresh, stewed, or canned fruits.

Members of group 3, such as rice, hominy, or macaroni, are often served in place of a vegetable. When this is done, care must be taken to supply fruits and greens in order that mineral matter and fruit and vegetable acids may not be lacking.

Breads, Biscuits and Similar Foods

(Representing group 3, depended upon to supply starch.)

Wheat bread or corn bread, hot or cold, rye bread, biscuits, rolls, crackers.

Potatoes and sweet potatoes are an important source of starch and similar nutrients in the diet, and in this respect resemble bread and other cereal foods. However, they are included in group 1 because of their special importance as a source of mineral and other valuable substances.

Puddings, Cakes, and Similar Foods

(Representing group 4, depended upon to supply sugar and give flavor.)

Bread pudding, cottage pudding, simple fruit puddings, custard, or other simple made desserts, dried sweet fruits, jams, preserves.

Fresh or canned fruits representing group 1, cheese representing group 2 with crackers representing group 3, or nuts representing group 2, may be used for dessert for variety.

Butter, Cream, and Similar Foods

(Representing group 5, depended upon to supply fats.)

Butter, cream, salad oil and other table and cooking fats and oils.

PRESERVE EGGS

Eggs Can Be Kept in Good Condition for Several Months in a Solution of Water Glass or Limewater

March, April, May, and June are the months when the hens of the country produce about 50 per cent of the lay of the whole year. These are the months, also, when the thrifty housewife who has her own hens or who can draw upon the surplus supply of a nearby neighbor, puts away in water glass or limewater eggs for next autumn and winter. To insure success, care must be exercised in this operation. The following directions are from the United States Department of Agriculture.

In the first place, *the eggs must be fresh*, preferably not more than two or three days old. This is the reason why it is much more satisfactory to put away eggs produced in one's own chicken yard.

Infertile eggs are best if they can be obtained; so, after the hatching, exclude roosters from the flock, and kill them for the table as needed.

The shells must be clean. Washing an egg with a soiled shell lessens its keeping quality. The protective gelatinous covering over the shell is removed by water, and when this is gone the egg spoils more rapidly.

The shells also must be free from even the tiniest crack. One cracked egg will spoil a large number of sound eggs when packed in water glass.

Earthenware crocks are good containers. The crocks must be clean and sound. Scald them and let them cool completely before use. A crock holding six gallons will accommodate eighteen dozens of eggs and about twenty-two pints of solution. Too large crocks are not desirable, since they increase the liability of breaking some of the eggs and spoiling the entire batch.

It must be remembered that the eggs on the bottom crack first and that those in the bottom of the crocks are the last to be removed for use. Eggs can be put up in smaller crocks, and the eggs put in the crock first should be used first in the household.

Water-Glass Method

"Water glass" is known to the chemist as sodium silicate. It can be purchased by the quart from druggists or poultry supply men. It is a pale yellow, odorless, syrupy liquid. It is diluted in the pro-

portion of one part of silicate to nine parts of distilled water, rain water, or other water. *In any case, the water should be boiled and then allowed to cool.* Half fill the vessel with this solution and place the eggs in it, being careful not to crack them. The eggs can be added a few at a time until the container is filled. Be sure to keep about two inches of water glass above the eggs. Cover the crock and place it in the coolest place available from which the crock will not have to be moved. Inspect the crock from time to time and replace any water that has evaporated with cool boiled water.

How to Use the Preserved Eggs

When the eggs are to be used, remove them as desired, rinse in clean, cold water, and use immediately.

Eggs preserved in water glass can be used for soft boiling or poaching up to November. Before boiling such eggs, prick a tiny hole in the large end of the shell with a needle to keep them from cracking. They are satisfactory for frying until about December. From that time until the end of the usual storage period—that is, until March—they can be used for omelettes, scrambled eggs, custards, cakes, and general cookery. As the eggs age, the white becomes thinner and is harder to beat. The yolk membrane becomes more delicate, and it is correspondingly difficult to separate the whites from the yolks. Sometimes the white of the egg is tinged pink after very long keeping in water glass. This is due, probably, to a little iron which is in the sodium silicate, but which apparently does not injure the egg for food purposes.

Limewater Method

Limewater is also satisfactory for preserving eggs, and is slightly less expensive than water glass. A solution is made by placing two or three pounds of unslaked lime in five gallons of water, which has been boiled and allowed to cool, and allowing the mixture to stand until the lime settles and the liquid is clear. The eggs should be placed in a clean earthenware jar or other suitable vessel and covered to a depth of two inches with the liquid. Remove the eggs as desired, rinse in clean, cold water, and use immediately.

GETTING THE MOST FOOD FOR ONE'S MONEY

If you want to get the most food for your money, use cereals (flour, meal, cereal breakfast foods, etc.) freely, taking pains to prepare

them with great care and to vary the kind used from day to day if necessary to keep people from tiring of them.

Remember that a quart of whole milk a day for each child, to be used as a beverage and in cookery, is not too much.

Plan carefully both in buying and in serving.

Do not be ashamed to plan closely. Thrift in food means providing enough food, neither too little nor too much.

Notice carefully how much of such staples as flour, sugar, milk, cooking fat, etc., is used each week for a month, and see if there are any ways of cutting down the quantity needed.

Buy non-perishable materials in quantities if better prices can be secured and there is a good storage place in the home. Neighbors can sometimes club together to get lower rates.

Estimate carefully how much of any material will be needed before laying in a supply, then see that none is wasted by careless handling.

Try to make the dishes served of such size that there will be enough to satisfy the appetite of the family and no unnecessary table and plate waste.

Do not be above noticing whether anything usable is thrown away with the garbage, which always shows how thriftily food is used in a household.

Many inexpensive materials can be made attractive and the diet can be pleasantly varied by a wise use of different flavorings.

"Finicky" tastes in food often prevent the use of many valuable materials which might be the means of saving money.

Good food habits are an important part of personal hygiene and thrift. Children get such habits by having suitable amounts of suitable foods served to them and then being expected to eat what is set before them.

True economy lies not only in buying wisely, but also in making the fullest possible use of what is bought.

Plain Talk by the U. S. Department of Agriculture

"For partial immediate relief, every individual and community should consider earnestly the matter of food conservation and the limitation of waste. As a nation we seem to have a disdain of economizing. In many homes there is a strong feeling that it is 'only decent' to provide more food than will be eaten, and that it is demeaning to reckon closely. The experts of the Department of Agriculture report to me that the dietary studies made by them point to an annual food waste of about $700,000,000. Of course the waste in families of very limited means is slight, but in the families of moderate and ample means the waste is considerable. Even if the estimate were reduced by half, the waste would still be enormous.

"The food waste in the household, the experts assert, results in large measure from bad preparation and bad cooking, from improper care and handling, and, in well-to-do families, from serving an undue number of courses and an over-abundant supply and failing to save and utilize the food not consumed. As an instance of improper handling, it is discovered that in the preparation of potatoes, 20 per cent of the edible portion in many cases is discarded."—Secretary of Agriculture.

WHAT A PAT OF BUTTER MEANS

One pat or serving of butter is a little thing—there are about 64 of them in a pound.

In many households the butter left on the plates probably would equal one pat, or one-fourth of an ounce, daily—scraped off into the garbage pail or washed off in the dish pan.

But if every one of our 20,000,000 households should waste one-fourth of an ounce of butter daily, on the average, it would mean 312,500 pounds a day—114,062,500 pounds a year.

To make this butter would take 265,261,560 gallons of milk—or the product of over half a million cows.

But butter isn't eaten or wasted in every home, some one objects. Very well. Say only 1 in 100 homes wastes even a pat of butter a day—over 1,000,000 pounds wasted. Still intolerable when butter is so valuable a food and every bit of butter left on a plate is so useful in cookery.

WHAT A SLICE OF BREAD MEANS

A single slice of bread seems an unimportant thing. In many households one or more slices of bread daily are thrown away and not used for human food. Sometimes stale quarter or half-loaves are thrown out.

Yet one good-sized slice of bread—such as a child likes to cut—

weighs an ounce. It contains almost three-fourths of an ounce of flour.

If every one of the country's 20,000,000 homes wastes on the average only one such slice of bread a day, the country is throwing away daily over 14,000,000 ounces of flour—over 875,000 pounds, or enough flour for over a million 1-pound loaves a day. For a full year at this rate there would be a waste of over 319,000,000 pounds of flour—1,500,000 barrels—enough flour to make 356,000,000 loaves.

As it takes 4 1-2 bushels of wheat to make a barrel of ordinary flour, this waste would represent the flour from over 7,000,000 bushels of wheat.

Fourteen and nine-tenths bushels of wheat on the average are raised per acre. It would take the fruit of some 470,000 acres just to provide a single slice of bread to be wasted daily in every home.

To produce this much flour calls for an army of farmers, railway men, flour-mill people. To get the flour to the consumer calls for many freight cars and the use of many tons of coal.

But, someone says, a full slice of bread is not wasted in every home. Very well—make it a daily slice for every 4 or every 10 or every 30 homes—make it a weekly or monthly slice in every home—or make the wasted slice thinner. The waste of flour involved is still appalling—altogether too great to be tolerated when wheat is scarce.

Any waste of bread is inexcusable when there are so many ways of using stale bread to cook delicious dishes.

WHAT ONE-HALF CUP OF MILK MEANS

Half a cup of milk—whole, skimmed, or sour—a seemingly trifling matter—hardly worth the trouble to keep or use.

In many households quite a little milk is wasted—left uncovered in glasses—regarded as useless because the cream has been skimmed off—allowed to sour—poured down the sink or thrown out.

Now, if every home—there are 20,000,000 of them—should waste on the average one-half cup daily, it would mean a waste of 2,500,000 quarts daily—912,500,000 quarts a year—the total product of more than 400,000 cows.

It takes a lot of grass and grain to make that much milk—and an army of people to produce and deliver it.

But, every household doesn't waste a half cup of milk a day? Well, say that one-half cup is wasted in only one out of a hundred homes. Still intolerable—when milk is so nutritious—when skim milk can be used in making nutritious soups and cereal dishes—when sour milk can be used in bread making or for cottage cheese.

Use left-over milk—sweet, skimmed, or sour.

WHAT AN OUNCE OF MEAT MEANS

An ounce of edible meat—lean meat, fat and lean, suet or fat trimmed from steak, chop, or roast—seems hardly worth saving.

Many households take just this view of the matter—do not trouble to put such an insignificant scrap into the ice-box or soup pot—do not bother to save for cookery a spoonful or two of drippings or a tiny bit of suet or fat.

Yet if every one of our 20,000,000 American families on the average wastes each day only one ounce of edible meat or fat, it means a daily waste of 1,250,000 pounds of animal food—456,000,000 pounds of valuable animal food a year.

At average dressed weights, it would take the gross weight of over 875,000 steers, or over 3,000,000 hogs—bones and all—to provide this weight of meat or fat for each garbage pail or kitchen sink. If the bones and butcher's waste are eliminated, these figures would be increased to 1,150,000 cattle and 3,700,000 hogs.

Or, again, if the waste were distributed according to the per capita consumption of the various meats (excluding bones), it would use up a combined herd of over 538,000 beef animals, 291,000 calves, over 625,000 sheep and lambs, and over 2,132,000 hogs.

Millions of tons of feed and hay, the grass from vast pastures and the labor of armies of cattlemen and butchers also would be scrapped by this meat-waste route.

But—every household doesn't waste an ounce of meat or fat every day? Very well—make it one out of a hundred families, but keep in mind that all meat allowed to spoil and all meat and fat rendered inedible by improper cooking, scorching or burning must be counted as waste. Make it an ounce every other day or one a month. Such waste still would be unendurable, when meat is scarce and when fat is of such vital food importance to many nations.

Waste of meat or fat is inexcusable. Every bit of lean meat can be used in soups, stews, or in combination with cereals; every spoonful of fat can be employed in cookery; every bit of drippings and gravy can be saved so easily and used to add flavor and nourishment to other dishes.

ASK YOURSELF—"CAN IT BE EATEN?"

Don't throw out any left-overs that can be reheated or combined with other foods to make palatable and nourishing dishes.

DO YOU KNOW—

That every bit of uneaten cereal can be used to thicken soups, stews, or gravies?

That stale bread can be used as the basis for many attractive meat dishes, hot breads, and desserts?

That every ounce of skimmed milk or whole milk contains valuable nourishment? Use every drop of milk to drink or to add nourishment to cereals, soups, sauces, and other foods. If you do not want milk to sour, keep it cool, clean, and covered contin

Remember, too, that sour milk, buttermilk, and sour cream are valuable in cookery; so do not waste any. Sour milk and buttermilk can be used with soda in making hot breads, or sour milk can be turned easily into cottage cheese, cream cheese, or clabber. Sour cream is a good shortening in making cakes and cookies, and useful for salad dressings and gravies for meat.

That every bit of meat and fish can be combined with cereals or vegetables for making meat cakes, meat or fish pies, and so on, and to add flavor and food value to made dishes?

DO YOU KNOW—

That every spoonful of left-over gravy can be used in soups and sauces or as flavoring for meat pies, croquettes, and vegetables?

That every bit of clean fat trimmed from meat and every spoonful of drippings and every bit of grease that rises when meat is boiled can be clarified, if need be, and is valuable in cookery? Don't fatten your garbage pail at the expense of your bank account.

That when meat is boiled, the water dissolves out some valuable food and flavoring material? Save such water for soup or for use in stews or gravies, or for cooking vegetables. Save and keep soup stock. Every professional cook knows that keeping a soup or stock pot is an essential economy.

DO YOU KNOW—

That valuable food and flavoring get into the water in which rice and many vegetables are cooked? Use such water for soup making if it has an agreeable flavor. Don't pour nourishment down the sewer.

That careless paring of potatoes or fruits often wastes as much as 20 per cent of their food material?

That the outside leaves of lettuce and the tops of many vegetables make desirable cooked "greens" or even salads?

ABANDON FOOD PREJUDICES

DON'T BE FINICKY

Be willing to try new foods. Certain plentiful and nourishing foods widely used and enjoyed in one section are practically unknown in other sections of the country. Learn to know ALL the good things, not a few only.

People too easily get into food ruts—insist on eating only the food they are used to and refuse to give a fair trial to others. This causes undue demand for certain staples, with resulting scarcity of high prices when crops are short. At the same time other valuable foods may be relatively cheap and available. A striking instance of this is

failure fully to appreciate rice—a valuable source of starch—when potatoes are scarce and high. Another example is refusal in certain sections to use anything but wheat as a breadstuff when corn—a valuable cereal widely used elsewhere as a breadstuff—is plentiful and relatively cheap.

Remove from your vocabulary "don't like" or "can't eat."

Most individual prejudices against widely popular foods are either imaginary or baseless.

Try to like every simple food; give it a fair trial.

BE A FOOD CONSERVATOR

KEEP PERISHABLE FOOD COLD

Keep perishables cool, clean, and covered.

The moment meat, fish, milk, and eggs are allowed to get warm they begin to spoil.

Bacteria and germs multiply rapidly in slightly warm food, and quickly make it dangerous or unfit to eat.

Keep perishable foods in the coolest, cleanest place you can provide, preferably in a good refrigerator or ice house, but, at any rate, in covered vessels suspended in the well, or in the coolest clean place in your home or cellar.

Do not keep perishable foods in a hot kitchen or pantry, or in a sunny place a moment longer than is necessary.

Dry cold is a better preservative than damp cold.

KEEP FOOD COVERED AND CLEAN

The dust particles in the air carry mold and germs.

Meat, fish, and milk are ideal breeding grounds for such germs. Keep your food covered so that these bacteria and germs will have as little chance as possible to get on your food.

House flies—better called "typhoid flies"—are among the dirtiest things that enter our homes. They fly from sewers, privies, and manure heaps, carrying filth on their feet, which they deposit on any food on which they alight. Frequently germs of typhoid fever are carried by flies in the filth on their bodies, and in their excrement (flyspecks).

Ordinary cleanliness demands that flies be kept out of our homes and away from our food.

Health protection makes it essential to banish flies. Keep all food covered, or at least screened from these carriers of deadly disease and filth. Destroy flies by every possible means.

THIRTY MILLIONS HAVE PLANTED FOOD GARDENS

The people of this country planted food gardens as never before in history. Conservative estimates show that thirty million people

have turned their attention to providing food F. O. B. the Kitchen Door this year. The greatest thrift lesson ever placed before the eyes of the world is being enacted in this country today.

The people are not only endeavoring to produce food for themselves, but they are learning the value of land as never before.

SOMEBODY HAS TO RAISE EVERYTHING YOU EAT—DO YOUR SHARE

KEEP YOUR SOIL WORKING ALL SEASON

1. Keep your garden working all season. Hasten early crops by starting seed in boxes in the house, in hotbeds and cold frames if the weather prevents out-door planting.

2. Get your ground ready for planting as soon as the soil is dry enough to work.

3. Plant for early crops as soon as the weather permits. Make successive plantings of lettuce, radishes, beans, and other short season crops.

4. Start new crops between the rows of plants that are soon to be removed.

5. As fast as the ground is cleared of one crop, start a new crop.

6. See that your garden toward Fall is full of potatoes, beets, turnips, cabbage, and other staple foods that can be stored for the winter.

SAVE ALL SURPLUS FRUITS AND VEGETABLES

If your garden at any time produces more than you can use immediately, do not allow the surplus to spoil.

Can surplus beans, peas, corn, tomatoes, beets, spinach, pumpkin and squash for winter use.

Can or preserve apples, peaches, pears, cherries, quinces, berries, and other cultivated and wild fruits.

Every can of vegetables or fruit and every jar of preserved food means that you have saved food materials that would have otherwise been wasted.

Can or store root crops, cabbage, and other vegetables properly, so that they will keep well and supply you with food when the garden ceases to produce.

THE FARMER'S RESPONSIBILITY

Upon the farmer rests in large measure the final responsibility of winning the war in which we are now involved. The importance to the nation of an adequate food supply, especially for the present year, cannot be over-emphasized. The world's food reserve is very low. Therefore, the man who tills the soil and supports the soldier in the field, and the family at home, is rendering as noble and patriotic a service as is the man who bears the brunt of battle.

EAT ENOUGH AND NO MORE

The sane standard, "Eat enough food and no more," rigidly followed, would greatly reduce food bills in many homes and at the same time tend to improve the physical condition of all members of the household.

CONSERVE FOODS

Prevent food waste by being ready to can, preserve, dry, pickle, salt, or store surplus fruits and vegetables. See that everything needed is at hand and ready to use.

Can for home use in glass or stoneware containers.

Reserve tight-sealing containers for canning. Put up jams, jellies, preserves, and fruit juices in glasses or bottles sealed with cork or paper and paraffin.

Concentrate products, especially soup mixtures, so that each container will hold as much canned food and as little water as possible.

Dry such vegetables as corn, string beans, navy beans, mature lima beans, okra, etc. Pickle or brine suitable vegetables in crocks.

Make your fields or home gardens produce dry beans, peanuts, soy beans, cabbage, potatoes, and root crops that can be stored in pit or cellar.

Don't have an empty container in your neighborhood.

THE SOUP POT A MEANS OF ECONOMY

Since many of the protein-rich foods are among the most expensive of those in common use, it is especially important to make the fullest possible use of what is bought. Not all of the meat which we buy is suitable for use as such. The masses of fat which are trimmed off before cooking or are left on the platters, may be saved, rendered and used in cooking, while the bones, gristle, and other refuse parts find their best use in the soup pot, where the long, slow cooking in water draws out the gelatin, fat, and other nutritive material they contain. This stock, as the resulting liquid is called, may serve as the basis not only of a great variety of soups, but also of gravies and sauces, and may be used for cooking vegetables, rice and similar foods. When it is used for soup, its flavor may be varied by adding various vegetables, such as carrots, onions, tomatoes, turnips, and celery. It may be thickened with flour, bread crumbs, or okra. Boiled rice, barley, macaroni, and other pastes and croutons (small pieces of stale bread fried a delicate brown in deep fat) may be put in to increase the food value of soup and vary its appearance and taste.

FEED YOUR OWN FAMILY FIRST

Don't feed high-priced human food to hogs or chickens.

Don't send valuable food to the incinerator or the fertilizer heap.

Don't pour into the sewer nourishing food in the shape of milk. skim milk—sweet or sour—soup, gravy, or melted fat, or water in which cereals or vegetables have been cooked.

Keep good food out of your garbage pail and kitchen sink. Demonstrate thrift in your home, and make saving, rather than spending, your social standard.

KEEPING UP THE MEAT SUPPLY

An early increase in the animal products of the country should be made, as live-stock holdings already are too low, and should not be diminished further. Increase must come through enlarging the supply of feed, by more efficient methods of feeding, and through more complete control of contagious diseases. These diseases take a toll of more than one-quarter billion dollars annually, more than half of which is due to controllable diseases, such as hog cholera, black leg, and tick fever. The Federal government, co-operating with the States, could profitably expand its intensive regulatory services so as to embrace every important live-stock district.

Pork production could be increased substantially through the more extensive use of Fall litters, better care and feeding.

Milk production could be increased fully one-fourth by more liberal and intelligent feeding.

The poultry products of the United States can and should be doubled within a year.

BEST CROP FOR POOR LAND

There is probably no other crop that will produce better on infertile, poorly-tilled lands than will buckwheat. It is well suited to light, well-drained soils, such as sandy loams, and to the silt loam soils.

The farmer need generally have no fear of this crop being damaged by either insect enemies or fungous diseases, as the buckwheat plant is but little affected by either of these. It is an excellent crop for destroying weeds and for renovating and putting the soil in fine, mellow condition.

CORN THE MOST EFFECTIVE SUBSTITUTE FOR WHEAT

Ordinarily the quantity of corn produced in the United States is from three to four times the quantity of wheat, but only a very small portion of the crop—from five to ten per cent—has been used for human food. This amount may be estimated in normal times at about 200,000,000 bushels a year. Not over five per cent has been exported in peace times. A relatively slight increase in the corn acreage, therefore, will place many millions of bushels more of human food at the disposal of the world without interfering in any way with the feed needed for the support of live stock.

In the past, with an abundance of grain of other kinds, corn has not been in great demand for human consumption. But with other grains no longer abundant, circumstances will compel more general recognition of the value of corn as human food. It is the best substitute for wheat that we have, and can be utilized in breads, mushes, and a variety of other ways.

MEAT BY THE HOG ROUTE

The meat supply of the country can be increased more quickly by the "hog route" than by any other.

No branch of live-stock farming is more productive of satisfactory results than the raising of well-bred swine, if conducted with a reasonable care.

Hogs fit into the modern scheme of farming on nearly every farm, and are one of the most important animals to raise, both for meat and for money. They require less labor, less equipment, and less capital, make greater gains per hundred pounds of concentrates fed, reproduce themselves faster and in greater numbers, and give a quicker "turnover" of money than any other animal except poultry. Farmers of the South and West particularly have awakened to the merits of the hog and are rapidly increasing their output of pork and their bank accounts.

The hog has no rival as a consumer of by-products and numerous unmarketable materials which but for him might be wasted. Kitchen refuse, not only from farms, but also from hotels and restaurants, when cooked before being used, makes an excellent feed.

The value of skim milk as a hog feed is known on every farm, though not always fully appreciated. In the neighborhood of many

large dairies, pork production is a very prominent and lucrative supplement to the dairy industry.

Pig clubs have increased very rapidly during the past seven years. In 1910 there were fifty-nine members in the United States; today the number exceeds thirty thousand, found principally in Arkansas, Alabama, California, North Carolina, Louisiana, Georgia, Texas, Oregon, Oklahoma, Nebraska, Kentucky, Indiana, and Massachusetts. These states contained 21,673 members last year, but pig clubs are being formed rapidly in other states.

BREAD IN THE HOME

If home-baked bread were uniformly well made, it would be used more extensively than at present in place of more expensive foods, say specialists in the United States Department of Agriculture, and this would be a distinct economy. From the standpoint of nutrition it makes very little difference whether breadstuffs are served in the form of bread or in the form of breakfast cereals, side dishes with meat, or desserts. A man engaged in moderate muscular work can profitably consume about three-fourths of a pound a day of breadstuffs in any one of these forms. This quantity is the equivalent of one pound of baked bread. As a matter of fact, however, it is not probable that in the average family this quantity is consumed, and the deficiency is made up by the use of more expensive substances. Of course, bread alone is not sufficient for the maintenance of health, but from both an economical and a hygienic point of view should be used more extensively than it usually is.

USE UP STALE BREAD

Do Not Permit the Odds and Ends Frequently Found in the Bread Box to Be Wasted

Bread is one of the items most commonly wasted in many American households, say the specialists of the United States Department of Agriculture. This waste is probably due to the fact that many housekeepers do not think of bread as costing much and are careless about its use, or do not know what to do with the odds and ends frequently found in the bread box.

Good, fresh bread has a spongy texture, which in time disappears, leaving the bread dry and crumbly, the moisture gradually passing

out through the crust. Bread a little too stale to be appetizing, but not yet hard, may be freshened by putting it into the oven for a few minutes. The heat seems to drive the moisture from the crust back into the center of the loaf, making the crust more crisp and the crumb a little more spongy. Some housekeepers moisten the surface of the bread and sometimes cover it before putting it into the oven, but others think that moistening injures the texture of the crust without improving the crumb.

CARE OF BEES

How the Beekeeper Can Aid in Augmenting the Sugar Supply

In view of the probable shortage of the domestic sugar supply this year, it is highly desirable that beekeepers increase the production of honey to the greatest possible extent.

In any locality where the temperature drops to freezing in winter, bees need winter protection, but many beekeepers fail to realize this. If proper protection has been given during winter, this should be left on the hives as long as possible. Even if colonies have been neglected during the winter, spring protection may help wonderfully in permitting the bees to build up in time for the honey flow. Protection from wind is quite desirable.

Every beekeeper should bend every energy this year to increasing the production of honey. He will be aiding the country by providing a product of high food value when other sugars are scarce.

COTTAGE CHEESE

How to Make Palatable and Nourishing Food from Skim Milk

Cottage cheese, a delicious and nourishing food, can be made from skim milk which might otherwise go to waste. After removing the cream for coffee, the skim milk that is not needed for puddings, gravies, etc., can easily be made into cottage cheese. If the milk is sweet it should be placed in a pan and allowed to remain in a clean, warm place at a temperature of about 75 degrees, until it clabbers. The clabbered milk should have a clean, sour flavor. Ordinarily this will take about forty-eight hours, but when it is desirable to hasten the process, a small quantity of clean-flavored soured milk may be mixed with the sweet milk. As soon as the milk has thickened to the consistency of thin jelly, it should be cut into

pieces the size of a walnut, after which the curd should be stirred thoroughly with a spoon.

Place the pan of broken curd in a kettle of hot water so as to raise the temperature to 100 degrees F. Cook at that temperature for about twenty minutes, during which time stir vigorously with a spoon for one minute at five-minute intervals. At the conclusion of the heating, pour the curd and whey into a small cheesecloth bag (a clean salt bag will do nicely) and hang the bag on a fruit strainer rack to drain. After five or ten minutes, work the curd toward the center with a spoon. Raising and lowering the ends of the bag helps to make the whey drain faster. To complete the draining, tie the ends of the bag together and hang it up. Since there is some danger that the curd will become too dry, draining should stop when the whey ceases to flow in a steady stream. The curd is then emptied from the bag and worked with spoon or butter paddle until it becomes fine in grain, smooth, and of the consistency of mashed potatoes. Sour or sweet cream may be added also, to increase the smoothness, palatability, and flavor. Then it is salted according to taste, about one-quarter ounce to a pound of curd.

EAT MORE CORN

The Most Effective Substitute for Wheat at Our Disposal

Ordinarily the quantity of corn produced in the United States is from three to four times the quantity of wheat, but only a very small portion of the crop—from five to ten per cent—has been used for human food. This amount may be estimated in normal times at about 200,000,000 bushels a year. Not over five per cent has been exported in peace times. A relatively slight increase in the corn acreage, therefore, will place many millions of bushels more of human food at the disposal of the world, without interfering in any way with the feed needed for the support of live stock.

In the past, with an bundance of grain of other kinds, corn has not been in great demand for human consumption. But with other grains no longer abundant, circumstances will compel more general recognition of the value of corn as human food. The department is urging strongly the wider use of corn in the diet. It is the best substitute for wheat that we have, and can be utilized in breads, mushes, and a variety of other ways. We should make every effort to avail ourselves of it.

ECONOMY IN LEATHER

Simple Measures Recommended for Increasing the Wear of Shoes and Preserving Harness

War demands leather—leather for soldiers' shoes, leather for harness, leather for equipment of many kinds. In this country there is no such surplus that we can afford to waste any of it; and it is wasting leather not to care for and preserve it properly. In the army and out, we all wear shoes. If we manage them rightly, they will last longer, we will not need so many new ones, and there will be more left for others.

To Save Shoes

Shoes should be oiled or greased whenever the leather begins to get hard or dry. They should be brushed thoroughly, and then all the dirt and mud that remains washed off with warm water, the excess being taken off with a dry cloth. While the shoes are still wet and warm, apply the oil or grease with a swab of wool or flannel. It is best to have the oil or grease about as warm as the hand can bear, and it should be rubbed well into the leather, preferably with the palm. If necessary, the oil can be applied to dry leather, but it penetrates better when the latter is wet. After treatment, the shoes should be left to dry in a place that is warm, not hot.

DON'T USE RHUBARB LEAVES

Because rhubarb leaves contain certain substances which make them poisonous to a great many persons, specialists of the United States Department of Agriculture warn housewives against using this portion of the plant for food. A number of letters have been received by the department calling attention to the fact that certain newspapers and magazines are advocating the use of rhubarb leaves for greens, and that disastrous results have followed the acceptance of the advice.

INCREASING POULTRY PRODUCTS

That poultry products of the United States could be doubled within a year means that if everybody in a position to help did their part, six hundred million dollars' worth of food would be added to our supply this year.

This includes both meat for the table and eggs. Very few farmers practice a systematic plan of disposing of their fowl after they have ceased to be productive, although it is well known that fowls of the heavier breeds, such as the Plymouth Rocks, cease to produce a profitable number of eggs at the end of their second laying year, and this holds true of the lighter breeds, such as the Leghorns, at the end of their third laying year. Consequently, if efforts were made to dispose of all females when their best laying days were over, a large quantity of poultry meat would be placed on the market. All poorly-developed chickens should likewise be culled out and used as meat. This way of disposing of unprofitable fowls would allow the farmer to feed his grain to younger and more productive fowls.

TINY CRACKS SPOIL THIRTEEN MILLION DOZEN EGGS

Over thirteen million dozen eggs, most of them laid in the spring, spoil in cold storage simply because their shells have been cracked slightly between the hen and the cold room. Just a little more care in handling eggs on the farm, in getting them to the country collector, in packing them properly in cases for shipment, in handling the cases as fragile shipments, will greatly lessen this enormous and important waste of valuable food. The United States Department of Agriculture, therefore, urges everyone who has anything to do with getting eggs to the storage markets to exercise unusual care this year to prevent them from being even checked. Once an egg shell is cracked, even so slightly that the eye cannot see it, germs and molds find ready entrance into the egg and spoil its contents. Nature has provided the egg with a delicate protective, gelatinous coating, which, as long as it is intact, tends to keep out air and germs. Once this coating is pierced, the keeping quality of the egg is lessened immediately. Five per cent of the 2,400,000,000 dozen eggs put in cold storage, the specialists find, spoil because they were checks, that is, eggs so slightly cracked that they could not be detected in quick handling during the spring rush of storing the bulk of eggs for winter use.

RAISING A FEW CHICKENS

For the family which wishes to keep poultry for home consumption rather than for the market, the so-called general-purpose breeds are

better suited than what are known as the egg-laying breeds. Plymouth Rocks, Wyandottes, Rhode Island Reds and Orpingtons are all good varieties for the average person who does not intend to go into the poultry business on a considerable scale. These breeds are good layers and they also make good table poultry. Furthermore, they will hatch their own eggs and brood their own chickens, whereas the Leghorns and other breeds of the egg-laying class, do not sit, and the use of expensive incubators and brooders is necessary in order to perpetuate these flocks.

The prime essentials for a small poultry house are fresh air, dryness, sunlight, and space enough to keep the birds comfortable. For the general-purpose breeds, about four square feet of floor space should be allowed for each bird. The fowls should also have as much outside space as possible to run in. If this area is too small, the ground quickly becomes foul, and in time makes it difficult to rear chickens with good success. In order to avoid foulness, it is advisable to divide the lot and to sow part of it to the quick-growing grains, such as oats, wheat, or rye. The hens are turned on to the growing grain when it is a few inches high. Under this method the yards may be changed every three or four weeks during the growing season. A combination that has proved successful consists of six or seven bushels of equal parts of oats and wheat to the acre, wheat alone being used for the last seeding in the fall. For the convenience of those who have only small areas at their disposal, it may be stated that an acre contains 43,560 square feet.

To secure a satisfactory number of eggs, the fowls should be fed both a dry mash and a scratch ration. The dry mash may consist of equal parts of corn meal, bran, middlings and beef scrap. This should be kept before the birds in a hopper all the time. A good scratch ration is made up of equal parts of corn, wheat, and oats, fed in a litter four to five inches deep, twice daily. It is desirable that the birds should eat about as much of this as of the mash. This means feeding about one quart of mixed grain daily to twelve Plymouth Rock hens, or to fourteen Leghorns, and an equal weight of mash. Usually waste table products will also be available, and these may be made up into a moist mash in place of the dry mash. In this case the table scrap, if it contains much meat, is substituted for the beef scrap. If it does not contain any considerable portion of meat, it should merely be added to the dry mash already described.

WETTING SPOILS 5,016,000 DOZEN EGGS EACH YEAR

Approximately 5,016,000 dozen eggs spoil needlessly every year in cold storage simply because someone has let clean eggs get wet or has washed dirty eggs before sending them to market. Careful investigations of large quantities of stored eggs show that from seventeen to twenty-two per cent of washed eggs become worthless in storage, whereas only four to eight per cent of dirty eggs stored unwashed spoil. The explanation is simple. Water removes from the shell of the egg a gelatinous covering which helps to keep air and germs out of the inside of the egg. Once this covering is removed by washing or rain which gets to eggs in the nest, germs and molds find ready access to the contents and spoil the eggs.

HOW TO USE "LEFT-OVERS" AND SAVE FUEL AND LABOR AT THE SAME TIME

Numerous palatable combinations of two or more food materials which can be prepared by the housewife with but little trouble in themselves will supply the major part of a well-chosen meal. Such combinations should be used very frequently to simplify and make more economical the serving of a rational diet for the family. Combining left-overs into a palatable dish, for example, effects a considerable saving in material, in fuel, and in the labor of preparing meals and of cleaning cooking utensils and dishes. Good use thus is made of food which might otherwise be wasted, when one dish is prepared, cooked, and handled, instead of several.

The character of any one of the daily meals should be determined by that of the other meals that are served. A light breakfast and a light supper or luncheon, for instance, usually makes desirable a heavier dinner. In some families the preference may be for a hearty breakfast and dinner and a very light supper, and so on through a considerable range of individual tastes. If the meal is to be a light one, the combination dish, together with the bread and butter, which usually accompany American meals, may be all that is wished. If the combination dish forms the central part of a heartier meal, it is in accordance with our usual food customs to serve with it, in addition to bread and butter, such foods as garden vegetables, fruits (fresh or cooked), and simple desserts. Good planning necessitates in the principal meals of the day such variety as has been suggested, in order that all the varied nutritive substances which the body requires may be supplied.

The following are some suggestions for a few of the many nutritous combination dishes which may be prepared without too much trouble from staple food materials and common "left-overs," and for other foods which can accompany them to make a well-rounded meal. Every housekeeper, of course, will have a special liking for certain dishes and combinations.

SOME TYPICAL COMBINATION DISHES AND FOODS SERVED WITH THEM TO MAKE RATIONAL MEALS

Spaghetti or macaroni or rice cooked with tomato, onion, or green pepper, and cheese or cheese sauce,

served with

White, graham or whole-wheat bread and butter, and stewed or sliced fruit and simple cookies.

Combination Dishes

Boiled rice baked (scalloped), with minced left-over meat, chipped beef, or fresh or canned fish,

served with

Beet, dandelion, or other greens, dressed with peanut, olive, cottonseed, or other table oil, with vinegar and lemon juice enough to flavor the dressing, and wheat, corn, or rye bread and honey.

Boiled rice scrambled with eggs,

served with

A vegetable such as stewed tomatoes, canned corn, green peas or beans, and
Bread and butter, and
Nuts and raisins or other dried fruits.

Green peas and canned salmon with white (i. e., thickened milk) sauce,

served with

Corn bread and syrup.

Combination Dishes

Meat pie (meat from inexpensive cuts) or fish pie with flour or potato crust,

served with

Turnips, carrots, onions, or parsnips, and
Biscuits and butter, with jam or jelly or hot chocolate.

Mashed potato with creamed codfish (i. e., cream sauce containing a little salt codfish),

served with

Lettuce with oil and vinegar or lemon juice dressing, and
Crackers and cheese or peanut butter sandwiches.

Meat stew (inexpensive cuts or left-overs), with turnips or other vegetables, including left-overs, and with rice in the stew or flour or corn-meal dumplings; or fish chowder made from fresh, canned, or dried fish, crackers, skim milk, and onion,

served with

Bread and butter, and
Fresh or stewed fruit.

Boiled dinner (corned beef or corned mutton cooked with fresh vegetables, as potatoes, turnips, carrots, etc.),

served with

Bread and butter, and
Apple or other fruit and bread-crumb pudding.

Cowpeas boiled with pork and combined with boiled rice.

served with

A green vegetable or vegetable salad, and
Honey, brown sugar, maple sugar, or date sandwiches.

Combination Dishes

Beans baked with pork or bacon,

served with

Boston brown bread and butter, and
Tart apple sauce and cookies.

Bean and cheese roast (a mixture of cooked beans and cheese prepared and seasoned like a meat loaf) with tomato sauce or brown gravy,

served with

Sweet potatoes, and
Bread and butter, and
Sliced orange and banana or other fruit.

BRAN FLOURS FOR HOME BREAD MAKING

The use of flours which contain more or less bran is sometimes advisable both for the sake of the variety which they give to the diet and because of the mineral substances and growth-regulating substances these flours contain.

Whole-wheat or Graham Bread

1½ cups luke-warm milk.
3 tablespoons brown sugar.
1½ teaspoons salt.
3 cups whole-wheat or graham flour.
½ yeast cake.

Scald the milk, together with the sugar and salt. When luke-warm, add the yeast, mixing it first with a little of the milk. Add the flour, beat well, and let it double its volume. Beat it thoroughly, put into a pan, and let it rise. In a pan of standard size it should come nearly to the top.

The above recipe may be used in preparing bread from home-ground meal. There are many homes, particularly in the country, where the housewife can obtain unground wheat at moderate cost. If ground in the ordinary coffee mill, such wheat makes a coarse

bread, not very light in texture, but of such good flavor that it may well be used occasionally to give variety to the diet. It is useful, too, in places where good bran cannot be obtained easily, and where coarse breads are desired as a means of preventing constipation. In making such bread with a view to economy the housekeeper should compute what it will cost her per loaf, including labor and fuel, as compared with other breads she makes. Skim milk instead of whole milk can be used; home-made yeast, either liquid or dry cakes, is a possibility, and some might like the bread with less sugar or unsweetened. Another recipe which has been worked out follows:

CORN AND CHEESE—A SUBSTITUTE FOR MACARONI AND CHEESE

Corn may be used with cheese in place of macaroni, specialists of the United States Department of Agriculture point out, for the preparation of a delicious and nutritive combination dish.

1 cup of samp (coarsely ground or cracked corn).
1 quart of water.
1½ teaspoons salt.

Boil the samp in the salted water until tender. Drain and combine with the following sauce:

1 cup skim milk.
1 cup finely cut cheese.
2 tablespoons flour.
1 teaspoon salt, 1-4 teaspoon mustard, paprika, or other seasoning.

Mix the seasoning with the dry flour. Add enough milk to form into a smooth paste. Add the remainder of the milk and heat in a stewpan, stirring constantly until thick. Add the cheese and stir until it is thoroughly melted.

Put a layer of the boiled samp in a baking dish or casserole. Add a layer of sauce and so on alternately until the material is all used. Sprinkle bread crumbs over the top layer of sauce and cook in a medium oven until the crumbs brown.

Lye hominy or hulled corn (to give it both its Southern and its Northern name) may be used in place of coarse cracked corn in the preparation of this dish. If this product is used, it is unnecessary to heat it until it is placed in the oven.

CHICKEN FAT VALUABLE IN COOKERY

Do you throw away the body fat of poultry—big layers of clean, sweet, yellow fat found around the gizzard and elsewhere around the intestines of the chicken? If you do, you are throwing away that which French housewives consider the finest of fats for making cakes and especially puff paste. In certain seasons in New York and other big cities, this fat is so highly esteemed that it brings as much as $1.10 per pound. So great is the demand for this fat that many people make a business of collecting it from butchers and others who dress poultry before delivering it to customers. Housewives would do well to insist on having it delivered if they buy their poultry dressed. By using chicken fat in cooking they can cut down the amount of fat they must buy for that purpose. To prepare it, try it out in a double boiler, or other vessel set in hot water, until the fat just melts from the tissues and can be poured off. This fat becomes rancid easily and should be kept cool and covered like butter, and used in a very few days. Chicken fat, like goose fat, may be used for shortening in cakes such as spice cake, where the seasoning used will mask any flavor which the fat might have. It can also be used for frying the chicken itself, or other meats, and for warming vegetables, etc.

Waste No Food

FOOD IS WASTED

When we eat more food than our bodies need for growth and repair and to supply energy for our work. Over-eating tends to poor health and fat instead of brawn, makes us sluggish and indolent instead of energetic and resourceful. Eat enough and no more. Eat for physical and mental efficiency.

When food is burned or spoiled in cooking. Improperly-prepared or poorly-seasoned food will be left on the table and probably wasted. Buy food wisely and then prepare it carefully.

When too much food is prepared for a meal. Unserved portions are apt to be thrown into the garbage pail or allowed to spoil. Many housekeepers do not know how to use left-over foods to make appetizing dishes.

When too much food is served at a meal. Uneaten portions are left on the plate and later thrown into the garbage pail. Learn to know the needs of your family and serve each no more than you think he will want.

When anything edible is allowed to go to the garbage pail or allowed to spoil for lack of proper handling.

When food is handled carelessly. Buy clean food, keep it clean until used, and be neat in all details of cooking and serving. This lessens waste and is a valuable health measure as well.

"Who's Who" Among Garden Enemies

The following "Who's Who" Among Garden Enemies, is prepared by the National Emergency Food Garden Commission of Washington in a nation-wide campaign for more food gardens and in a campaign to conserve the nation's food supply.

ANTHRACNOSE, "leaf spot" or "rust," attacking beans, tomatoes, celery and melons. Use Bordeaux mixture or summer-strength lime-sulphur or ammoniacal copper-carbonate to avoid stains on foliage of celery.

APHIS, or Plant Lice. Attacks peas, melons, and so on. Use nicotine preparations or kerosene emulsion at intervals of three or four days.

ASPARAGUS BEETLE. Use arsenate of lead on summer foliage; cut and burn all vines in late summer.

BLIGHT, affecting cucumbers, potatoes, and other things in various forms. Spray with Bordeaux frequently enough to keep all new growth covered. Dust with sulphur-lead preparations.

CATERPILLARS. Various kinds attack cabbage, tomatoes, tobacco, and so on. Use arsenate of lead, paris green, or hellebore, or pick by hand.

CUTWORMS. Fat ground worms, brown with dark stripes, cutting through the stems of many plants, especially when just up or newly set out. Trap under pieces of shingle or flat stones, or scatter about toward nightfall a mash made of one quart of wheat bran, one teaspoonful of paris green or white arsenate, one teaspoonful of a cheap molasses, mixed with enough water to make a mash.

CUCUMBER BEETLE, yellow and black striped. Use tobacco dust. Pick by hand the first bugs in early morning.

FLEA BEETLE. A small, hard-shelled jumping beetle, which punctures leaves of tobacco, potatoes and seedling plants. Use tobacco dust or kerosene emulsion on seedling plants; Bordeaux candle lead on tomatoes and potatoes.

MEALY BUG. A scale-like insect with cottony covering, attacking some flowers. It seldom appears in the vegetable garden. Use kerosene emulsion; apply alcohol with a small brush.

POTATO BEETLE. Use arsenate of lead or paris green. On egg plants use lead only and pick by hand.

SQUASH BUG, lively flat black. Use tobacco dust, or pick by hand to get rid of old bugs and eggs; use kerosene emulsion or nicotine sulphate for the young ones.

WHITE FLY. Attacks tomatoes, vine crops and some flowers. Use tobacco dust, spray with kerosene emulsion.

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BEFORE beginning your work check over the following list of items used in canning which can be purchased at the Five and Ten-Cent Store:

Mason fruit jars
Lightning fruit jars
Jar rubbers
Paraffin wax
Paring knives
Funnels
Mixing bowls
Apple corers
Measuring cups
Fruit-jar labels
Preserving kettles
Jelly glasses
Porcelain fruit-jar tops
Wax paper
Tin pails
Mixing spoons
Ladles

Filling jars with hot liquid after the product is packed

A tray of packed jars just after removal from sterilizin bath in a homemade water-bath outfit. The jars ar ready for sealing

Packing blanched and cold-dipped product into jars. Note empty jars to be packed inverted in pan of hot water. They are thus kept clean and hot